

What is claimed is:

1. A reception apparatus comprising:

a transmission channel response calculation section calculating a transmission channel response from a reception signal and a reference signal;

a decision section determining reliabilities of a plurality of transmission channel responses calculated using reception signals received at different time periods, and deciding on a weight synthesis method;

a transmission channel response synthesis section applied with the plurality of transmission channel responses calculated using the reception signals received at different time periods, weight-synthesizing said plurality of transmission channel responses based on said weight synthesis method decided by said decision section, and obtaining a synthesized transmission channel response; and

a compensation section compensating for a distortion of the reception signal using said synthesized transmission channel response.

2. A reception apparatus according to claim 1, wherein

said decision section gives a heavier weight for weight synthesis to the transmission channel response having higher reliability.

3. A reception apparatus according to claim 1, wherein

said decision section selects only the transmission channel responses having reliability greater than a

predetermined threshold value for weight synthesis.

4. A reception apparatus according to claim 1, wherein

said decision section has a correlation calculation section calculating correlations between said plurality of transmission channel responses, determines reliabilities of said transmission channel responses based on correlation calculation results and decides on the weight synthesis method.

5. A reception apparatus according to claim 4, wherein

said transmission channel response synthesis section obtains said synthesized transmission channel response by giving weights according to said correlations and weight-synthesizing said transmission channel responses.

6. A reception apparatus according to claim 4, wherein

said transmission channel response synthesis section obtains said synthesized transmission channel response by an average value of said transmission channel responses having said correlations greater than a predetermined threshold value.

7. A reception apparatus according to claim 4, wherein

said correlation calculation section calculates the correlations using only most significant bits of said plurality of transmission channel responses.

8. A reception apparatus according to claim 1, wherein

said decision section has a signal intensity measurement section measuring signal intensities of respective signal segments of the reception signals corresponding to said plurality of transmission channel responses, determines reliabilities of said transmission channel responses based on signal intensity

measurement results and decides on the weight synthesis method.

9. A reception apparatus according to claim 8, wherein

said transmission channel response synthesis section obtains said synthesized transmission channel response by giving weights according to said signal intensities and weight-synthesizing said transmission channel responses.

10. A reception apparatus according to claim 8, wherein

said transmission channel response synthesis section obtains said synthesized transmission channel response by an average value of said transmission channel responses having said signal intensities equal to or greater than a predetermined threshold.

11. A reception apparatus according to claim 1, wherein

said decision section has an error detection section detecting errors of demodulation outputs of the reception signals corresponding to said plurality of transmission channel responses, determines reliabilities of said transmission channel responses based on error detection results and decides on the weight synthesis method.

12. A reception apparatus according to claim 11, wherein

said transmission channel response synthesis section obtains said synthesized transmission channel response by an average value of said transmission channel responses having error occurrence frequencies obtained from said error detection results and equal to or greater than a predetermined threshold value.

13. A reception apparatus according to claim 1, wherein

said transmission channel response calculation section calculates the transmission channel response from a frequency spectrum of said reception signal and a frequency spectrum of said reference signal; and

said distortion compensation section compensates for the frequency spectrum of said reception signal using said synthesized transmission channel response.